

What is claimed is:

1. A purified BMP-8 protein comprising at least one of the following sequences:

5 a) Arg-His-Glu-Leu-Tyr-Val-Ser-Phe-Gln-Asp-Leu-Gly-Trp-Leu-Asp-Trp-Val-Ile-Ala-Pro-Gln-Gly-Tyr (SEQ ID NO: 1);

10 b) Leu-Ser-Ala-Thr-Ser-Val-Leu-Tyr-Tyr-Asp-Ser-Ser-Asn-Asn-Val-Ile-Leu-Arg (SEQ ID NO: 2);

c) Ala-Cys-Cys-Ala-Pro-Thr-Lys (SEQ ID NO: 3);

15 d) Thr-Asn-Glu-Leu-Pro-Pro-Pro-Asn-Lys-Leu-Pro-Gly-Ile-Phe-Asp-Asp-Val-His-Gly-Ser-His-Gly-Arg (SEQ ID NO: 4); and

a e) amino acid #143 (Ala) to #281 (His) of Figure 2_x (SEQ ID NO: 14)

20 2. The protein of claim 1 further characterized by the ability to induce the formation of cartilage and/or bone.

25 3. A purified protein characterized by the amino acid sequence encoded by the DNA of ATCC #75010.

a 4. A purified BMP-8 protein comprising amino acid #143 to #281 of Figure 2_f (SEQ ID NO: 14).

a 30 5. A BMP-8 polypeptide sequence comprising amino acid #1 - #281 of Figure 2_f (SEQ ID NO: 14).

6. A DNA sequence encoding a BMP-8 protein said DNA sequence comprising at least one of the following sequences

35 a)

(b) recovering, isolating, and purifying from said culture medium a protein characterized by an amino acid sequence comprising amino acid #143 to #281 of Figure 2

(SEQ ID NO:14)

5 13. A host cell transformed with a DNA of claim 6.

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14. A host cell transformed with the DNA of claim 7.

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15. A host cell transformed with the DNA of claim 8.

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16. A host cell transformed with the DNA of claim 9.

17. A method for producing a BMP-8 protein said method comprising the steps of:

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18. (a) culturing a cell transformed with a vector having a DNA sequence of claim 6 said DNA sequence in operative association with an expression control sequence therefor; and

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(b) recovering, isolating and purifying from said culture medium a protein characterized by the ability to induce cartilage and/or bone formation.

18. A method for producing a purified BMP-8 protein said method comprising the steps of

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(a) culturing a cell transformed with a vector having a DNA sequence of claim 9 in operative association with an